

Sources of Social Support: Adolescents With Cancer

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Purpose/Objectives: To evaluate how a cancer diagnosis affects adolescents' perceived sources of social support, amount of support needed, and level of satisfaction with support compared to an age-matched, healthy, adolescent group.

Design: Cross-sectional, comparative, nonrandom survey.

Setting: Summer camp for adolescents with cancer and a rural high school in the southeastern United States.

Sample: Adolescents with a diagnosis of cancer ($n = 64$) and age-matched, healthy adolescents ($n = 115$).

Methods: Subjects completed the Social Support Questionnaire, Perceived Social Support From Family Scale, Perceived Social Support From Friends Scale, and demographic information forms.

Main Research Variables: Sources of social support, amount of support perceived, and level of satisfaction with support.

Findings: Adolescents with cancer perceived social support coming from both friends and family and reported high levels of support satisfaction from each source. Compared to healthy adolescents, those with cancer reported similar support sources and satisfaction levels; however, adolescents with cancer perceived parental relationships as more supportive.

Conclusions: Similarities between healthy adolescents and those with cancer regarding social support were more prevalent than differences. The social benefits of camp settings for chronically ill children should be explored further.

Implications for Nursing: Nurses and other healthcare professionals should allow adolescents in the healthcare setting every opportunity to maintain their social networks of friends and family by encouraging visitation, providing social opportunities in the hospital, and emphasizing the importance of attending school when medically able.

The average five-year survival rate for all types of childhood cancer is 77% (American Cancer Society [ACS], 2002). About one in every 1,000 young adults ages 20–29 is a survivor of pediatric cancer (ACS, 1999). One implication of increased survival rates is that many forms of childhood cancer are becoming more like chronic illnesses rather than terminal diseases. Although a large body of research has addressed the psychological impact of cancer on the lives of children and adolescents, limited research exists on the long-term social implications of the disease. Nurses and others who work with chronically ill adolescents should

Key Points . . .

- ▶ High survival rates of child cancer necessitate examining the social impact of living with and surviving the disease.
- ▶ The findings of this study suggest that adolescents with cancer had social supports that compared favorably with those of healthy adolescents.
- ▶ Adolescents with cancer should be afforded every opportunity to maintain their social networks of friends and family throughout treatment.

be aware of the specific developmental needs of adolescents and the effects of illness on social development. With more adolescents with cancer surviving into adulthood, the need to examine the social implications of living with diagnosis and treatment is imperative (Kazak, 1993; Kliewer, 1997). Nurses are in a unique position to use social support as a coping tool for teenage patients.

Social Support

Social support can be defined as the social aspects of an environment that provide support to an individual (Krahn, 1993). Researchers have found that perceived support is one of the most critical and effective factors in helping adolescents (Hartup, 1993) and adults cope with and adjust to life changes (Krahn; Sandler, Wolchik, MacKinnon, Ayers, & Roosa, 1997). The nature of adolescence requires almost constant adjustments in cognitive, physical, and social development. The importance of perceived social support during this phase of life cannot be underestimated. Clearly, a cancer diagnosis during this already turbulent time requires significant effort and adjustment (Manne & Miller, 1998).

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The research literature suggests two predominant models that focus on the positive effects of social support. The direct effects model assumes that individuals will benefit from social support regardless of the levels of stress they are experiencing (Krahn, 1993). The stress-buffering model suggests that social support is beneficial in reducing the negative effects seen during periods of high stress (Sandler et al., 1997). Thus, social support may benefit adolescents at various points when facing the additional stress of cancer in their lives.

Hartup (1993) reported that the need for intimacy is one characteristic that emerges in adolescence. Adolescents expect friends, more than anyone else, to meet these intimacy needs. Furman and Buhrmester (1992) reported that 10th-graders perceived friends as being their primary sources for social support. Clearly, adolescents view their peers as valuable sources of social support. However, the finding may reflect only the direct effects model of social support, whereby adolescents rely on their friends when faced with the normative stressors of life rather than at times of high stress.

Although the importance of social support from friends cannot be denied, Sandler et al. (1997) suggested that, as a stress buffer, family support is more important than peer support. One of the main sources of social support for adolescents comes from parents (Barrera & Garrison-Jones, 1992). Whereas social supports help adults cope with stress, Kostelicky and Lempers (1998) examined stress, distress, support, and well-being of high school seniors and found beneficial effects of strong family social support for adolescents. They concluded that strong social support from family members offsets the negative effects of stress and leads to reduced distress and a more positive perspective on life and the future.

Barrera and Garrison-Jones (1992) documented the benefits of family support, finding that adolescent psychiatric patients receiving high levels of family support were less depressed than those receiving low levels of family support. Although friends and family members provide adolescents with important networks of social support, support of friends may better fit the direct effects model, whereas parental support can be seen in both the direct effects and stress-buffering models.

Relationships of Adolescents With Parents and Friends

Adolescents appear to be in a period of transition and transformation in the parent-child relationship and are experimenting with disengagement from family (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). Contrary to popular belief, this disengagement does not signal disintegration of adolescent-parent relationships, but rather supports adolescents' development of autonomy (Dornbusch, Peterson, & Hetherington, 1991). Larson et al. found that although adolescents spent considerably less time with family members, the time spent in actual communication with family members, particularly mothers, did not decline. The study indicated that disengagement from family members was not related to conflict within family relationships, but rather to forces from outside the family that result in less time available for adolescents to spend in the family unit. Although family relationships were changing and adolescents were becoming, in a sense, disengaged, family relationships became increasingly important (Dornbusch et al.; Larson et al.).

Adolescents who spend less time with family members generally spend more time interacting with their peers.

Friendships are considered one of the principal features in adolescent social development (Hartup, 1993). Friendships are extremely important during adolescence because the relationships provide opportunities for interactions that are not available otherwise. Among the positive developmental outcomes from this socialization are self-understanding, emotional regulation, and formation of relationships (Berk, 2000).

The Impact of Cancer on Social Relationships

When adolescents are diagnosed with cancer, social development among friends and the quest for autonomy from parents likely are affected. At a time when adolescents are struggling to gain independence from their families and develop identities within peer groups, the nature of the illness demands just the opposite (Weekes & Kagan, 1994). Socially, the ability of abstract thought enables adolescents to play out potential social situations in their minds before they actually occur (Selman, 1980). This ability provides teenagers with the opportunity to envision the impact that a cancer diagnosis will have on present and future relationships.

The reality of a cancer diagnosis may lead to physical and emotional isolation from friends and can be socially devastating to adolescents (Noll, Bukowski, Davies, Koontz, & Kulkarni, 1993; Vannatta, Gartstein, Short, & Noll, 1998; Weekes & Kagan, 1994). Weekes and Kagan found that 85% of adolescents with cancer reported that they viewed themselves as different from their friends and would not describe their lives as normal. Additionally, failing health and debilitating treatments resulted in increased dependence on family members and frequent separation from friends. Woodgate (1998) also found that among the fears reported by chronically ill adolescents was the inability to separate from parents, coupled with the feeling of being different from peers.

In addition, long-term social consequences continue for adolescents who survive childhood cancer (Kazak & Meadows, 1989; Noll et al., 1993; Weekes & Kagan, 1994). Vannatta et al. (1998) found that even after treatment ended, children surviving brain tumors were described by their classmates, teachers, and themselves as socially isolated. Their peers perceived them as being sick, easily worn out, and often absent from school. Although Noll et al. found that adolescent survivors were much like their peers in most areas of psychological functioning, they were viewed by peers as shy and anxious, which resulted in social isolation.

To further research social difficulties associated with surviving childhood cancer, Kazak and Meadows (1989) assessed 35 adolescents who survived childhood cancer, at least five years after treatment, at two data points six months apart, using a combination of self-report questionnaires. The researchers found that adolescents perceived lower levels of satisfaction with social support from friends, family, and teachers during the second reporting period than they had six months earlier. This lower perception of social support was attributed to possible parental overprotectiveness and time away from peers. Weekes and Kagan (1994) noted that adolescents in their study ($N = 13$) had hoped to become more involved with their peers after completing treatment but were unable to do so partially because their parents became more attentive in monitoring their friends and activities away from home. However, the researchers found that some adolescents reinterpreted the meaning of their cancer to focus on what had been

gained, including closer relationships with their families. In contrast, Manne and Miller (1998) found in their study of 50 adolescents undergoing cancer treatment that these patients experienced greater instances of conflict with mothers and fathers than did healthy adolescents and perceived their friends as very supportive.

The important role of social support from family and friends for typically developing adolescents cannot be underestimated. However, because of the nature of cancer and its treatment, breakdowns in these support networks are likely for adolescents diagnosed with cancer (Manne & Miller, 1998; Noll et al., 1993; Vannatta et al., 1998; Varni, Katz, Colegrove, & Dolgin, 1994). Findings in the literature indicate a need for more research to assess social implications for adolescents who have been diagnosed with cancer (Kliwer, 1997; Manne & Miller). Therefore, the present study was designed to examine perceived sources of social support and levels of satisfaction with social support in adolescents with cancer and a healthy comparison group.

Methods

Sample

Participants in this study were drawn from a nonrandom sample of adolescents ages 12–19. Some were recruited from a camp for adolescents with cancer, and healthy adolescents were recruited from a high school in the southeastern United States. The camp sample consisted of 64 adolescents who had been diagnosed with cancer. Of the 170 camp adolescents who were invited to participate in the study, parental consent forms were received from 76, and 64 provided usable data. From the 120 high school students invited to participate, usable data were gathered from 115. Because the high school was part of a network of university research sites, parental consent was given for several projects each year.

Instruments

A four-part survey was designed for this study. The first section asked participants to provide demographic information, and the other three addressed issues of social support.

Social Support Questionnaire: The Social Support Questionnaire (SSQ) (Sarason, Levine, Basham, & Sarason, 1983) measured satisfaction with social support and perceived total support. The instrument describes six scenarios and asks respondents to list the initials of people who provided support in each of the specified situations. The six scenarios ask the following questions: Who can you count on when you need help, when you are under pressure or tense, to care about you, to help you feel better when you are feeling down, and to console you when you are upset; and who accepts you totally? Respondents could identify a maximum of nine sources for each situation. Respondents also were asked to rate their overall levels of satisfaction with this support using a six-point Likert scale ranging from one (very dissatisfied) to six (very satisfied). Scores for each of the six overall Likert items were summed and averaged with higher scores indicating greater satisfaction with support. Sarason et al. reported a correlation of $r = 0.34$ between the number of supports and overall support and an internal reliability for the six-item SSQ ranging from 0.90–0.93 for both number of supports and satisfaction. The instrument was developed and validated with undergraduate college students and has been used with

adolescent samples (Benson, Gross, & Kellum, 1999; Bradbury, Janicke, Riley, & Finney, 1999; Dumont & Provost, 1999; McFarlane, Bellissimo, Norman, & Lange, 1994; Stevens & Pihl, 1987). In the current study, a significant positive correlation ($r = 0.33$; $p < 0.001$) was found between the number of supports and overall support. Internal consistency as measured by coefficient alpha for the six-item SSQ was 0.77, which was slightly lower than that reported by Sarason et al. but deemed to be acceptable.

Perceived Social Support From Family Scale and Perceived Social Support From Friends Scale: The Perceived Social Support From Family (PSS-Fa) and Perceived Social Support From Friends (PSS-Fr) instruments were developed by Procidano and Heller (1983). In their original forms, the scales were reported to have a high test-retest reliability of $r = 0.88$. The scales were designed with responses of “yes,” “no,” or “don’t know” for statements that addressed family members’ and friends’ fulfillment of individuals’ support needs. PSS-Fa and PSS-Fr were validated with undergraduate college students. Carey (1994) modified the instruments for use with adolescents experiencing a chronic illness (i.e., cystic fibrosis). The three-item response option was expanded to a five-level ordinal scale to measure level of agreement with each statement. In addition, adolescents were asked to consider the perceived support from parents only rather than family members. The modified instruments reported an internal consistency of $r = 0.75$ for PSS-Fa and $r = 0.71$ for PSS-Fr.

The modified scales were used in the present study. Each consists of 20 items and asks subjects to rate the level of their perceived social support using a five-point Likert scale ranging from one (strongly disagree) to five (strongly agree), with higher numbers indicating higher perceived support. For the current study, respondents were asked to consider only parental support when responding to PSS-Fa. Four items (4, 16, 19, and 20) on PSS-Fa and six items (22, 26, 27, 35, 38, and 40) on PSS-Fr were reverse coded. Responses to each of the 20 PSS-Fa items were summed to produce a total score; a similar procedure was used to compute a total PSS-Fr score. Scores on PSS-Fa ranged from 39–66 with a mean of 69.9; those on PSS-Fr ranged from 36–59 with a mean of 67.6. In the current study, internal reliability as measured by Cronbach’s alpha was 0.75 for PSS-Fa and 0.72 for PSS-Fr.

Procedures

Data were gathered from adolescents who were attending an outdoor camp in the rural southeastern United States for children diagnosed with cancer. Institutional Review Board approval was obtained from the researchers’ university, the camp administration, and the participating high school.

A separate permission to collect data was obtained directly from the camp director. An explanation of the instruments as well as a consent form that addressed the manner in which data would be analyzed and reported, confidentiality, and the voluntary nature of the study were mailed to 170 parents and campers about a month before camp. Data were collected on the first full day of camp from campers who had parental permission and wished to participate. Because of the number of campers who volunteered to participate and the need to administer the surveys all at one time, the children were divided into two groups. The primary investigator administered the instrument to the younger adolescents (12–14 years old) and developed a short protocol; then, an assistant familiar with

the instruments and procedures administered the survey to the older group (15–19 years old). Several camp counselors were present to answer questions and collect materials. The survey included a section on demographics, the SSQ, PSS-Fr, and PSS-Fa. Participants were given verbal and written explanations of the importance of the project, as well as instructions for completing the survey.

Data collection from the comparison high school group took place during regular class meetings. The primary investigator explained the project to the participating teacher and school principal and received permission to distribute the questionnaire. Before distributing the instruments, the primary investigator explained both orally and in writing the purpose of the study and issues such as confidentiality and the voluntary nature of the study. Because the participating high school was affiliated with a university as a research site, parental permission had been obtained previously for several ongoing projects.

Data Analysis

Descriptive statistics were used to describe the sample and the dependent variables: overall social support, social support from parents, and social support from friends. Chi square association was used to compare background characteristics of the camp and school participants. Analysis of variance (ANOVA) was used to determine group differences in the dependent variables. Two-way ANOVA was used to examine whether differ-

ences in family structure between the groups affected perceptions of support from parents. Pearson product-moment correlation examined the relationship between the continuous variables of total support, support satisfaction, perceived support from parents, and perceived support from friends. All tests of significance used the 0.05 probability level.

Results

Description of the Sample

A total of 290 adolescents were invited to participate in this study. Of the 196 adolescents who chose to participate, usable data were obtained from 179 (a 62% response rate). The final sample included 64 adolescents with cancer and 115 without cancer. Some of the respondents provided incomplete demographic information, which accounts for variations in the number of responses for some categories. Statistical analyses used cases with complete data only.

Survey participants ranged in age from 12–19, with a mean age of 15.6. Fifty-one percent of the sample was Caucasian, and 55% were male. Fifty-one percent of the adolescents reported living with both biological parents. The majority of the participants had siblings (93%), 37% were the oldest children in their families, and 6% of the respondents were only children (see Table 1).

Chi square analysis compared background characteristics of the camp and school participants. Significant differences

Table 1. Background Characteristics of Respondents

Characteristic	Adolescents With Cancer (N = 64)		Healthy Adolescents (N = 115)		c ²	p
	n	%	n	%		
Gender					0.091	0.76
Male	36	56	62	54		
Female	28	44	53	46		
Race					48.471	<0.001
White	55	86	36	32		
Nonwhite	9	14	78	68		
Lives with					3.790	0.15
Both biological parents	34	52	54	50		
Single biological parent	12	19	34	31		
Alternative family	18	29	21	19		
Has siblings					1.136	0.27
Yes	58	91	109	95		
No	6	9	6	5		
Birth order					4.101	0.25
Oldest	24	40	39	35		
Middle	10	17	33	30		
Youngest	21	35	34	31		
Only child	5	8	5	5		
Father's level of education					36.348	<0.001
High school or less	22	36	90	82		
Some college or beyond	39	64	20	18		
Mother's level of education					14.189	<0.001
High school or less	21	35	74	65		
Some college or beyond	39	65	40	35		

Note. Because of nonresponses, n values may not total N values. Because of rounding, percentages may not total 100. Percentages reflect the responses received.

were identified in the areas of race, level of fathers' education, and level of mothers' education. With respect to race, 86% of the camp group was Caucasian compared to 32% of the school group. Furthermore, significantly more parents of the camp adolescents than the school sample's had higher levels of education.

Differences between the groups were somewhat expected because the school sample came from a very small, rural town in Alabama. Although the camp participants included adolescents from rural Alabama and Georgia, many came from the metropolitan area of Atlanta, GA. Although participants differed in race and parents' education, independent t tests failed to identify a significant difference in age between the camp and school groups ($t = 0.586$; $p = 0.56$).

Subjects were asked whether they ever had been diagnosed with a chronic illness. Within the school group, chronic conditions included asthma (11%) and cystic fibrosis (1%); however, none had been diagnosed with cancer. Among the camp sample, chronic conditions included asthma (14%), arthritis (2%), and cystic fibrosis (2%). Within the camp sample, 100% of the respondents had been diagnosed with a form of cancer at some point in their lives (see Table 2). Camp subjects were at varying stages in cancer treatment.

On the SSQ, the camp sample believed they had the fewest supports when they were upset ($\bar{X} = 3.09$) and the most supports when they really needed help ($\bar{X} = 5.35$). For each of the six scenarios, the subjects could list as many as nine supports. The healthy adolescents also listed the fewest number of supports when they were upset ($\bar{X} = 3.05$) and the most supports when help was really needed ($\bar{X} = 5.92$). Table 3 shows the number of supports named in each scenario. With regard to the total amount of support reported, subjects identified as few as zero and as many as 54. On average, campers reported 23.57 total supports and the school sample reported 25.94.

Independent t tests were conducted to determine whether the overall number of social supports and satisfaction with support reported on SSQ differed between the camp subjects and the school subjects. Although the camp group did report a lower number of supports ($\bar{X} = 23.57$) than the school group ($\bar{X} = 25.94$), the difference was not significant. The camp sample had slightly lower mean satisfaction scores with their supports ($\bar{X} = 5.15$) than the school group ($\bar{X} = 5.30$), but, as indicated by independent t tests, the differences were not significant.

Table 2. Types of Cancer Represented in Camp Group

Type of Cancer	n	%
Leukemia	20	31
Brain tumor	10	16
Ewing's sarcoma	8	13
Rhabdomya sarcoma	6	9
Hodgkin's disease	6	9
Non-Hodgkin's lymphoma	2	3
Other	9	14
No response	3	5

N = 64

Table 3. Number of Supports by Scenario on the Social Support Questionnaire

Scenario	Range	\bar{X}	SD
Adolescents with cancer			
Who can you count on when you need help?	2-9	5.35	1.90
Who can you count on when you are under pressure or tense?	0-9	3.71	1.85
Who accepts you totally?	0-9	4.33	2.21
Who can you count on to care about you?	0-9	3.92	2.01
Who can you count on to help you feel better when you are feeling down?	0-9	3.16	1.92
Who can you count on to console you when you are upset?	0-9	3.09	2.26
Healthy adolescents			
Who can you count on when you need help?	0-9	5.92	2.37
Who can you count on when you are under pressure or tense?	0-9	4.39	2.53
Who accepts you totally?	0-9	4.50	2.54
Who can you count on to care about you?	0-9	4.25	2.42
Who can you count on to help you feel better when you are feeling down?	0-9	3.83	2.41
Who can you count on to console you when you are upset?	0-9	3.05	2.26

PSS-Fa and PSS-Fr inventories further assessed social support from parents and friends. Respondents were asked to describe their levels of agreement with 20 statements addressing perceived levels of social support from parents. Scores on PSS-Fa ranged from 33 (low support) to 96 (high support), with a mean of 70.32 and standard deviation of 11.76. Independent t tests identified a significant difference between the two groups regarding perceived social support from parents ($t = 2.08$; $p = 0.04$). Adolescents with cancer perceived significantly higher support from parents ($\bar{X} = 72.71$) than the healthy adolescents ($\bar{X} = 68.92$). Further analysis investigated whether the differences in scores could be attributed to the type of family living arrangements. Descriptive statistics for these data are reported in Table 4.

Two-way ANOVA examined the relationships between group classifications and living arrangements and their effects on perceived social support from family (see Table 4). Results failed to identify a significant interaction ($F = 0.43$; $p = 0.62$). Furthermore, a significant main effect for living arrangements was not found ($F = 2.41$, $p = 0.09$). However, a significant main effect of group classification ($F = 4.84$; $p = 0.03$) was found, indicating that adolescents with cancer rated their social support from parents to be significantly higher than healthy adolescents.

Respondents also indicated their levels of agreement with 20 statements addressing perceived level of social support from friends. Although mean scores on PSS-Fr were slightly

Table 4. Perceived Social Support From Family Scale Scores by Group and Living Arrangements

Group	n	Score ^a	
		\bar{X}	SD
Adolescents with cancer			
Lives with both biological parents	34	73.44	10.23
Lives with single biological parent	12	75.58	8.81
Alternative family	18	68.94	15.78
Healthy adolescents			
Lives with both biological parents	54	70.74	10.23
Lives with single biological parent	34	68.41	11.34
Alternative family	21	65.58	12.35

^a Interaction effect of group by living arrangement: $F = 0.43$, $p = 0.62$; main effect of living arrangements: $F = 2.41$, $p = .09$; main effect of group: $F = 4.84$, $p = 0.03$.

higher for the cancer group ($\bar{X} = 74.19$) than the healthy adolescents ($\bar{X} = 73.06$), independent t tests did not identify significant differences between the groups ($t = 0.56$; $p = 0.58$).

Pearson product-moment correlation examined the relationships among total amount of perceived support, social support satisfaction, perceived social support from parents, and perceived social support from friends. The results for the overall sample are reported in Table 5. A low, significant, positive relationship was found between total support and support satisfaction, suggesting that as the number of supports increased, so, too, did satisfaction with that support. Additionally, perceived support from friends had a low, significant, positive relationship with total support and a low, significant, positive relationship with support satisfaction. These findings suggest that as perceived support from friends increased, adolescents believed they had more total support and were more satisfied with their support. A final positive relationship was identified between perceived social support from parents and support from friends. Perhaps adolescents who perceived they had high levels of support from their parents also tended to per-

ceive that they had high levels of support from friends. No relationship was found between perceived parental support and total support or between perceived parental support and support satisfaction. Overall, these findings suggest that the more social supports adolescents perceived they had, the more satisfied they were with their social support. Adolescents who perceived that they had high levels of social support from parents also tended to perceive that they had high levels of support from their friends.

To determine whether these results applied to adolescents with cancer and healthy adolescents, separate analyses were conducted for the two groups. Results of the analyses also are found in Table 5. Several differences were identified. For the adolescents with cancer, perceived support from friends was not statistically significantly related to total support or support from parents. This finding suggests that as perceived support from friends increased, support satisfaction also increased. For the healthy adolescents, the results were consistent with those of the overall group. For this group, an additional significant, positive relationship between support satisfaction and perceived social support from parents was found. Consequently, the data suggest that for healthy adolescents, as perceived support increased on all levels, so did support satisfaction.

Discussion

Results of this study suggest that, as a group, adolescents with cancer and those who survived childhood cancer had high levels of satisfaction with social support. The researchers hypothesized that a cancer diagnosis can present a strain on both familial relationships and friendships, thereby interfering with the amount of available and perceived social support. Although small differences existed between the adolescents with cancer and those who were healthy, the supposition of lower perceived support was not upheld by this study. In fact, results indicated that adolescents with cancer had social supports that compared favorably with those of healthy adolescents. Consequently, the data suggest that similarities with regard to amount of perceived social support and support satisfaction were more prevalent than were differences. Although this study did not measure perception of support during stress points, the fact that the adolescents with cancer had similar support satisfaction scores to their healthy counterparts suggests that the direct effects model (i.e., benefiting from support no matter what the levels of stress experienced) was operating with this sample. However, this does not preclude the assumption that the stress-buffering model (i.e., benefiting from support during periods of high stress) would not be effective when the need arose. As noted by Sandler et al. (1997), family support as a stress buffer seemed to be the prevalent mode for the adolescents in this study.

These results also support Manne and Miller's (1998) findings that adolescents with cancer did not experience lower levels of satisfaction with support from friends. Similarly, Kazak and Meadows (1989) found that among families with children who survived cancer, children's scores on social-emotional adjustment and social support were within normative ranges. The current study also found few areas where adolescents with cancer significantly differed from healthy adolescents.

Table 5. Correlation Coefficients

Group	Total Support	Support Satisfaction	PSS-Fa	PSS-Fr
Adolescents with cancer				
Total support	–	–	–	–
Support satisfaction	0.37**	–	–	–
PSS-Fa	0.10	0.04	–	–
PSS-Fr	0.21	0.28**	0.24	–
Healthy Adolescents				
Total support	–	–	–	–
Support satisfaction	0.36**	–	–	–
PSS-Fa	0.17	0.23*	–	–
PSS-Fr	0.42**	0.26**	0.36**	–

PSS-Fa—Perceived Social Support From Family; PSS-Fr—Perceived Social Support From Friends

* $p < 0.05$

** $p < 0.01$

A significant difference was identified on PSS-Fa. This finding suggests that adolescents with cancer perceived significantly higher levels of support from parents than their healthy counterparts. This finding was similar to that of Weekes and Kagan (1994), who found that adolescents grew closer to their families as a result of cancer. Further analysis indicated that the living arrangements of the adolescents did not influence results. Therefore, in this study, the presence or absence of cancer was the differential factor for the cancer group rating parental support higher than the healthy group.

Finally, Pearson product-moment correlation was used to examine the relationships among total amount of perceived support, support satisfaction, perceived support from parents, and perceived support from friends. The overall and specific group findings indicated a low, significant, positive relationship between amount of support and satisfaction, suggesting that as the number of supports increased, so, too, did the satisfaction with support.

Study Limitations

Caution should be taken when interpreting these results. First, significant differences were present between the groups in the areas of race and levels of parental education. These factors, coupled with regional differences, may have influenced some of the findings. Additionally, obtaining the cancer sample from a camp setting may have affected outcomes. Because the camp population was predominately white, cultural influences involving the perception of a camp experience may have been a factor in the racial makeup of the adolescent camp group. Adolescents who chose to attend camp perhaps had greater social support and were more socially confident and outgoing than those who chose not to attend. Furthermore, of the 170 invitations sent to campers, 76 agreed to participate in the study. Those who were willing to participate likely were the more outgoing and confident of the campers. Finally, many respondents may have attended the camp for years. Therefore, they presumably had that particular social network available to them for some time, thus offering more social support than typically is available to other adolescents with cancer. All of these factors present a selection bias among the camp sample that must be considered when interpreting the findings.

Implications

Results of this study are potentially important for all members of the healthcare team who interact with adolescents with cancer in both inpatient and outpatient settings. However, nurses, who often have trusting relationships with their patients, should be particularly encouraged to provide adolescents with cancer every opportunity to maintain their social networks of friends and family. This can be accomplished in several ways: advocating for liberal visitation policies, offering social opportunities for adolescents in the healthcare setting, and emphasizing the importance of attending school when medically able. Family-friendly hospital policies that provide spaces in which families can gather is another important advocacy position for nurses to take. Additionally, providing places for private conversations with friends from home and hospital peers facilitates social interactions and maintains social support networks among teens.


Developing new networks of support within the hospital population can be helpful to adolescent patients. For example, a teen room in a hospital where adolescents can gain independence from their parents and form peer relationships can facilitate the formation of social support among others enduring a similar illness experience. Social events such as pizza parties, movie nights, and even hospital proms can keep ill adolescents in touch with the events other teenagers are experiencing. Computers can connect adolescents to their old friends as well as develop new relationships through e-mail and other approved interactive Web sites. By recognizing the importance of social support to adolescents with cancer and by helping adolescents maintain these supports, healthcare professionals, especially nurses, can be the best facilitators in helping these adolescents understand that they are not alone in fighting their disease.

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For more information . . .

- ▶ Children's Oncology Group
www.childrensoncologygroup.org
- ▶ Help Adolescents With Cancer
www.mwmsites.com/hawc
- ▶ Young People With Cancer: A Handbook for Parents
www.cancer.gov/CancerInformation/youngpeople

These Web sites are provided for information only. The hosts are responsible for their own content and availability. Links can be found using ONS Online at www.ons.org.